

MEETING SUMMARY

HABITAT CONSERVATION PLAN

Technical Advisory Committee

Tuesday, December 5, 2006. 9am - Noon

Arizona Game and Fish Department Meeting Room

Tucson, Arizona 87545-3612

MEETING SUMMARY

City of Tucson Technical Advisory Committee: Guy McPherson, Trevor Hare, Rich Glinski, Lori Anderson (Coalition for Sonoran Desert Protection), Linwood Smith, Marit Alanen (USFWS), Dennis Abbate (AGFD), Ralph Marra (Tucson Water Department)

Attendees: Karen LaMartina (Tucson Water Department), Jaimie Galayda (Arizona State Land Department), Ann Phillips and Leslie Liberti (City of Tucson – Office of Conservation and Sustainable Development), Jessica Lee and Geoff Soroka (SWCA), Louise Misztal

1) Update Upcoming Meetings

a. Scheduled TAC Meetings:

- **January 17**, 1-3pm, @ AGFD. Tentative Topics: Finish Avra Valley HCP Discussion.
- **February 7**, 1-3pm, @ AGFD. Tentative Topics: Finish Avra Valley HCP Discussion.
- **February 21**, 1-3pm, @ AGFD. Tentative Topics: Resume Southlands HCP Discussion.
- **March 7**, 1-3pm, @ USFWS. Tentative Topics: Resume Southlands HCP Discussion.
- **March 21**, 1-3pm, @ AGFD. Tentative Topics: Resume Southlands HCP Discussion.
- **TBA**

2) Old Business

a. Meeting Minutes – November 21, 2006 Minutes

Leslie noted that the November meeting minutes would be available for the next meeting.

b. Updates

Leslie announced that the City of Tucson Office of Conservation and Sustainable Development is advertising a new position, Sustainable Development Administrator. Information is available from the City website. Guy requested the information for the

position be sent out over the TAC email list. She said that interviews would start in mid-January.

Ann said that HCP survey contracts are still slowly working through the City Procurements office and should be issued soon.

Ann noted that since the first winter rain has not arrived yet, that Tucson Water has not yet mowed the buffelgrass in Avra Valley due to wildfire hazards. Leslie noted that the Buffelgrass Summit has been scheduled for February 9, 2006.

3) New business

a. Avra Valley Discussion - HCP Chapter 6: Monitoring and Adaptive Management

Leslie explained that the current Chapter 6 draft is a framework of what would be a more comprehensive chapter. She said that this chapter has two components. The first is to insure that the City is complying with the provisions of the HCP and the permit. The second is to develop the internal process that the City will follow to make sure that as the HCP is developed the components of the plan are carried out. She noted that she would like the TAC to focus on the “6.2 Effectiveness Monitoring and Reporting” section first. The purpose of this section is to outline a plan to insure that the conservation program (Chapter 5) is accomplishing the stated goals and objectives and, to insure that as things change over time, that those changes are accounted for and the implementation of the plan meets those objectives. She covered the two bullet points listed regarding measuring the lack of mortality of the covered species and the quality of existing habitat within the planning area. These points would be accomplished through species-specific surveys and/or habitat monitoring. Trevor noted that he supports changing the language from “lack of mortality” to “lack of take” because “take” covers much more than just direct mortality of a species. Guy agreed with Trevor, noting that there are many factors that could lead to “take” of a species. Leslie asked the TAC how they would want to cover all of these issues in the chapter. Guy suggested thinking more about the causes of “take” then trying to manage the threats at source. Ann suggested going back to the Threats and Stressors Tables for each species. The group thought that would be a good idea.

Western Burrowing Owl

Leslie noted that species-specific surveys and monitoring make sense for the burrowing owl. She noted that, as it is currently written in Chapter 6, the draft says periodic surveys would be conducted in association with benchmark reporting requirements to U.S. Fish and Wildlife Service (USFWS), which are usually every 3-5 years. She said that the goal of the monitoring program is to track where the burrowing owls are located in Avra Valley and how that changes over time. She expressed concern over basing “success” on a specific number of owls due to the migratory nature of the species. For a monitoring plan, she suggested pre-construction surveys to locate burrows and possibly hack (“relocate”) individuals out of harms way, and then general population surveys every 3-5

years. She asked the TAC what they felt would be an adequate management and monitoring program. Linwood stressed defining the conservation goals first, because if the TAC really wants to know what is happening with such a dynamic population there would need to be weekly surveys. Trevor suggested that the TAC look at other HCP management and monitoring programs in California for this species. Rich noted that seasonal surveys, rather than “periodic” surveys, would be more appropriate in order to capture both the breeding and over-wintering populations. Rich said that he would support doing seasonal surveys every three years. Leslie asked the TAC how they would view “success” in Avra Valley. Would “success” be captured by evaluating the presence of owls in Avra Valley or should it be based on occupancy numbers? The TAC discussed the different options for measuring “success.” Many TAC members were concerned about the value of counting individual owl due to the dynamic nature of the population. Rich suggested “success” could be measured by the presence/absence of owls outside of the Burrowing Owl Management Areas (BOMAs). The TAC agreed that this would be a good strategy. Trevor suggested that if presence/absence surveys were to be done, perhaps they could be done more frequently because they are less intense of a survey.

Rich asked the TAC if the monitoring program should just monitor the “natural” population of owls rather than the influx of hacked owls. Trevor suggested that perhaps the organizations (i.e. Southern Arizona Homebuilders Association) hacking the owls could help pay for the monitoring of these relocated birds. Leslie said she is not sure to the extent in which the money is available for post-relocation. Marit said that AGFD has been working on monitoring owls after relocation. Leslie noted that, at the last TAC meeting, there had been discussion regarding the possibility of saturating Avra Valley with too many relocated owls. Instead, there was a question of whether the BOMAs should provide habitat for owls displaced by development in Avra Valley, not necessarily as hacking locations for owls outside of the HCP planning area.

Trevor noted that in the Sonoran Desert Conservation Plan (SDCP), the science technical advisory team has suggested that Pima County will study the abundance of owls and reproductive success in their monitoring program. Leslie reviewed the table, “Results of the Pima County Ecological Monitoring Program manager’s workshop, November 17, 2006,” so the TAC could compare the City HCP with the County plan. Ann added that at the Pima County meeting burrowing owls were not specifically discussed.

Leslie reviewed the AGFD burrowing owl report from Avra Valley and noted that they found many over-wintering owls, but only a few owls during breeding season. Marit noted that eight owls had been found near the Martin Farm. Trevor suggested that the TAC recommend doing presence/absence surveys unless evidence is found that owls are breeding. Then nest success surveys could be developed. Leslie asked the TAC if they felt it was appropriate to allow hacking of owls in the HCP planning area. Trevor said yes, as long as the owls are monitored post-relocation to determine when the threshold for population is reached. He said that owls are being displaced and there is not much other choice for this species in Maricopa County. Leslie asked if we want to consider this area as hacking sites. Marit suggested limited hacking to birds only in this area, as a way

to provide habitat for displaced local birds. Trevor considered limiting it to City Water CIP projects only.

Karen stressed that the purpose of the HCP is for the City to get “take” coverage, and that Tucson Water does not have the budget for a large-scale management and monitoring plan. She explained that the department would tie mitigation funding to specific water supply projects as they were approved. Leslie noted that the role of the TAC is to provide the stakeholders (Tucson Water) with biological recommendations, and that it would be up to negotiations with Tucson Water later to ultimately decide on the specifics of the HCP. Trevor noted that it might be appropriate for the recommendations to go through the Resource Planning Advisory Committee (RPAC) because Tucson Water is a public utility.

Leslie asked the TAC if conducting seasonal surveys would detect breeding activity. Dennis said that the only way to detect breeding activity is to survey for eggs in the burrow using a scope, which is a simple survey to do. Based on the results of burrowing owl surveys in Avra Valley last year, there were not many owls in the area during breeding season. He noted that this could change if BOMAs are created and artificial burrows are put in. Leslie asked if it would be better to focus reproductive success surveys in Avra Valley only in the BOMAs. The TAC thought this was a good idea. Dennis suggested to the TAC that perhaps the monitoring program should detail seasonal presence/absence surveys throughout Avra Valley and the specific breeding surveys within the BOMAs. And in the BOMAs, the owls should be banded in order to track occupancy, nesting status, and reproductive success. He also suggested adding language that read if, during the seasonal surveys outside the BOMA an increase in breeding activity is observed, then perhaps additional surveys could then be required.

Rich brought up concerns about regional management of burrowing owls and asked what agency was taking a look at “the big picture.” Dennis commented that AGFD monitors this to some degree, but that talking with David Grandmason (AGFD) and to people with Wild at Heart and USFWS would help provide an idea of how many owls are being relocated. Linwood said that he would follow up with the two agencies about the TAC’s concerns. Dennis noted that owls that are relocated to artificial burrows are monitored to some degree in order to monitor disturbance and threats. He said he would look into who monitors and what the data results with David Grandmason and Wild At Heart.

Leslie noted that research in California shows that passive eviction of owls is more effective than active eviction (hacking), as long as suitable habitat is nearby. The TAC discussed the methodology for hacking owls. Dennis noted that in some urgent situations the birds are actively evicted because there is not enough time to do passive eviction. Ralph asked about the success of getting data from tagged owls, especially when and where they migrate to and from. Dennis responded that birds migrate and disappear and it is not known whether they are predated or leave the area. Resightings of tagged birds is very rare for mobile birds, such as burrowing owls.

Leslie asked that, if the purpose of HCP is to ensure maintenance of the regional population of owls, would it be more valuable to leave areas open in Avra Valley for migrating over-wintering populations. Perhaps it would be better to leave the BOMAs free of hacked individuals in order to keep the land available for dispersing and over-wintering individuals and passive relocation of future evicted owls. Dennis suggested two BOMAs for passive relocation and two for active relocation. Leslie said she liked the idea of having four total BOMAs, with two reserved for use as hacking sites, and the other two managed for use of natural migration. Dennis stressed it would be important to run this strategy by local burrowing owl experts David Grandmaison and Courtney Conway.

The TAC revisited how “success” could be monitored with this strategy. They agreed that annual seasonal presence/absence surveys would be most effective outside the BOMAs, and if breeding birds are observed during these surveys, there should be a trigger in the plan to develop breeding-specific surveys.

Leslie suggested that perhaps success could be noted by the presence of burrowing owls on a specified percentage of the land. Dennis noted that Avra Valley should not only be considered valuable as a potential breeding area, but also as an important over-wintering area for the regional population. Rich said he wanted to get an idea from the experts how important Avra Valley is for regional hacking sites. Geoff suggested working with Courtney Conway (University of Arizona) to see if during his bioaccumulation studies he could collect baseline information for the HCP planning area. Leslie noted that Tucson Water has been working with the Tucson Audubon Society to put together a baseline study of City-owned lands in Avra Valley and passed out a packet of information to the TAC. Ann explained that the report was put together by conducting site visits and compiling previous reports on Avra Valley lands.

Rich noted that habitat in the BOMAs could be manipulated in order to enhance foraging area, cover, or prey base, for example. Trevor asked if speed limits could be lowered along the boundaries of the BOMAs in order to reduce mortality. Leslie said that the City does not have much influence over County/State roads. Dennis noted that, perhaps with road kill data, the City could provide an argument to the County to reduce the speed limits. Leslie suggested locating the BOMAs as far from the roads as possible. Dennis suggested that in addition, vegetation along roadways might need to be managed since the owls are attracted to the prey base roadway vegetation provides.

Guy noted that the USFWS catch and release permit process does not require any follow-up monitoring. He asked if it would be possible that the TAC request this change of USFWS. Marit said that it is a difficult procedure to change permitting requirements, and might be best undertaken at a state-level. Dennis noted that post-hacking monitoring always is restricted by time and money. Guy suggested transferring the cost burden to those doing the relocating. Dennis agreed, suggesting that the homebuilding community might be willing to do this. Leslie said that SAHBA frequently calls the City looking to relocate burrowing owls. However, she cautioned the TAC that the City might not be able to count this as mitigation because one entity cannot receive an HCP permit based on the

actions of someone else. The applicant can only do things that it has control of. She explained the court case that set this precedent.

Cactus Ferruginous Pygmy-owl

Leslie reviewed points from the previous discussion TAC meeting regarding pygmy-owl. She noted that the TAC discussed whether pre-construction breeding and/or dispersal surveys should be required in Avra Valley. Dennis noted that there is a fall survey protocol that attempts to locate dispersing owls, although the success from these surveys is not great. There is some limited evidence showing that dispersing owls can establish new territories in a short time and start calling in the fall. He said that, especially in areas with marginal habitat, these surveys have limited success. Leslie noted that there are two points for the TAC to consider when thinking about requiring surveys. First, she assumes that AGFD has a good handle on where the owls are. Second, the conservation reserve system captures the majority of mapped potential pygmy-owl habitat; so asked if it is necessary to survey if most of the development would be outside of the reserve system. Dennis responded saying that AGFD does not necessarily know where the owls are, and much of past research has been to address specific research questions. Trevor said yes it is important, because as biologists we would like to know if the owls are using the reserve system lands.

Leslie noted that the question of whether owls use Avra Valley for dispersal routes is outside the scope of the HCP, and the TAC should be focused on addressing the impacts of future Tucson Water activities in Avra Valley. Leslie asked the TAC what we would be trying to demonstrate by requiring surveys for pygmy-owl. Trevor noted that east-west corridors were mapped for the reserve system and said he would like to know if owls are moving through that area. Dennis said that AGFD knows at least one owl recently dispersed through Avra Valley, and has had conversations about the importance of the area for dispersing owls and perhaps over-wintering owls (1-3 month residency). He noted that Avra Valley is also important due to its proximity to the Altar Valley and the Tohono O'odham Nation, both which are known to have pygmy-owls. He suggested that if the TAC wanted to recommend surveys, efforts be focused on efficient surveys conducted in the most promising habitat in Avra Valley to confirm owls are not breeding there. He stressed the importance of maintaining habitat for owls to be able to disperse through. Rich suggested a conservation measure for the species could be habitat monitoring and receiving updates from AGFD on the location of any owls on or near Avra Valley lands.

Dennis noted that the Buenos Aires National Wildlife Refuge has completed putting up an initial pilot nest box project (45 boxes) in the hopes of attracting breeding owls. He noted that the area has appropriate structure and trees, but nesting observations have been rare. He suggested that nest boxes could be also put up in Avra Valley as a similar trial and noted that the monitoring is easily done. Ann noted that bird nesting boxes were placed at the Simpson Farm at one time and attracted nests of Africanized bees. Dennis noted that concern was addressed at the Refuge. Leslie noted that if the City wanted to do this, that it would be best to structure the program through a Safe Harbor Agreement (SHA). Trevor said he supports doing project clearance breeding surveys in areas that

contain good habitat, and suggested putting in nest boxes at selected sites only, away from disturbance activities. He suggested doing fall surveys in other areas.

Dennis asked the City if they wanted to increase the likelihood for breeding activity. Ralph said that the land was purchased by Tucson Water solely for water rights, not as public natural resource areas. Guy said that public land should not be restricted in definition to its original intent. Ralph said that these lands are set for city water purposes, and that other ideas have been brought up to support the water utility such as green energy needs. These and other uses would need to benefit the water utility and Ralph posed the question of whether the presence of owls would facilitate City use of the land. Leslie emphasized the need to protect what is there and the reserve system captures this. She noted that the role for nest boxes could be to achieve mitigation in some locations if Tucson Water projects have to encroach into the conservation reserve system.

Trevor asked if it would be possible for mitigation to include purchasing higher quality pygmy-owl habitat, such as in the Tortolita Fan area. Leslie said no, because mitigation has to be “like with like” replacement of what is being lost. Loss of breeding habitat cannot be mitigated with dispersal habitat, for example. She noted that Tucson Water wants to avoid riparian areas. She said that, because the reserve system captures the majority of mapped pygmy-owl habitat, that she feels comfortable including stiff mitigation requirements if development does encroach into this area. In response to a question, Ralph noted that mitigation requirements of CAVSARP included maintaining corridors through the properties by enhancing habitat and setting aside conservation easements.

Leslie said that there is a good argument for doing project clearance surveys, however wanted to discuss with Scott Richardson (USFWS) what type of surveys would be appropriate. Trevor asked if other surveys could be done for pygmy-owl such as prey base. Dennis said no, that these surveys are too costly and time intensive. Dennis said surveys should be as efficient and effective as possible.

Western Yellow-billed Cuckoo

Leslie noted that the only mapped cuckoo habitat is located in the northern portion of the planning area along the Santa Cruz River, mainly on the Simpson Farm. She noted that Tucson Audubon Society conducts annual bird surveys and that the management and monitoring plan would likely defer to what Audubon is doing already. Trevor stressed that habitat monitoring is important in case new suitable habitat develops in the future. The TAC seemed comfortable with this approach. Leslie noted that potential impacts along the Santa Cruz River are likely to be minimal, and noted that Tucson Water could not encroach into this area because Audubon has a 99-year Right-of-Entry agreement to do restoration work, some funded with Clean Water Act 404 in-lieu mitigation money. *[Tucson Water requested that minutes be appended with the following clarification: Per discussion with Chris Avery (City Attorneys’s Office), this property remains City land and the City continues to have the right to access, monitor, or develop – such as drill well, etc. – as needed to meet City needs. The agreement does not allow the City to destroy or arbitrarily damage the restoration work done and sets forth a long-term (99-*

year) agreement to protect those efforts, and as previously noted, the City has no plans to impact the area.] Leslie noted that cuckoo habitat was mapped according to the location of the floodplain, and that the area was never ground-truthed. It is likely some floodplain is not suitable cuckoo habitat. As of now, the reserve system captures 70 percent of the mapped floodplain.

Dennis noted that the level of effluent might change in the future in the river, which could impact the quality of habitat in the HCP planning area. He asked what responsibility the City would have if the riparian area is degraded due to a decrease in effluent. The point was taken and Leslie explained aspects of water law that govern water in the river. Dennis suggested including language in the HCP to deal with the chance water levels change in the future. Leslie agreed, and noted it would be appropriate to include the point in the “change circumstances” section. The TAC discussed the 10,000 acre foot conservation effluent pool of water, noting that the use of the water has yet to be allocated for regional conservation/restoration. Leslie suggested including the conservation pool as a potential for occurrence in HCP. Ann noted that 10,000 acre feet of water discharged from regional plants would not be a sufficient volume to flow all the way to the North Simpson site. Ralph stressed that water resource discussions are not trivial, and that they are very complicated in terms of rights and credits. Ann suggested a statement in the HCP to “encourage regional water management strategies to include biological strategies.” She noted that irrigation tailwater from the farm adjacent east to the North Simpson Farm have been flowing onto the farm and supporting willow habitat on the northeast corner of the property. A cuckoo was observed at this location. Leslie stressed that between the restoration lands at Simpson Farm and the reserve system, most of the mapped suitable habitat would be protected. She suggested that the TAC support decisions that lead to more riparian habitat, however much of this is outside the City’s control. The question of bird survey protocols used by Tucson Audubon was raised and Ann said they used IBA protocols at a minimum at the North Simpson site.

Pale Townsend’s Big-eared Bat

Leslie reviewed the management and mitigation strategy for the bat. She noted that the planning area contains no mapped roost sites. She noted that the species is very difficult to survey for, thus it would not be worthwhile to conduct species-specific surveys. Dennis noted that bats were observed to be roosting in an erosion cave on a 30 foot tall wash banks within Cienega Creek, and questioned if the planning area contained any similar areas that should be evaluated for roosts. Linwood noted that Pima County provided structural support for the cut bank to help preserve the roost site. Leslie noted that the Brawley Wash is incised on the southern portion of the Duval/Penzoil property. Ann noted that a cavity in cut bank along the river at the North Simpson site provided a roosting site for a barn owl. Leslie suggested doing a quick initial survey at these two sites for the potential of roosts. Dennis felt that since these areas have yet to be surveyed, the TAC should not say there are no potential bat roost sites in the planning area. Leslie noted that since these cut banks were along riparian areas they would probably be safe from impact. Marit suggested talking with Don Carter with Pima County who constructed the bank stabilization along Cienega Creek to find out more about the habitat used by the bats.

Tucson Shovel-nosed Snake and Ground Snake

Leslie explained that because not much is known about the snakes and they are difficult to find, species-specific surveys would likely not be effective. Trevor suggested requiring project clearance surveys in mapped habitat. Leslie noted that, with the Tucson shovel-nosed snake, the reserve system would capture at least 75 percent of the mapped habitat due to soil types found within floodplains and riparian areas. Dennis noted that it might be worthwhile to do salvage surveys to recover animals in the path of development, and suggested that might be the time to have more chance of actually finding the snakes. Trevor liked the idea, and suggested also looking for desert tortoise during these surveys. Trevor also asked how deep snakes were found when they were inactive. Phil Rosen (University of Arizona) should be contacted to get his opinion on whether project clearance surveys would be useful and how deep the snakes were found. He posed the question to the TAC that if one of the two snake species were located during salvage surveys, would that then stop the development? Leslie noted the snake species are not currently listed. The TAC was not sure what should be done regarding whether to conduct salvage surveys.

Habitat Monitoring

Leslie noted that for many species, it is difficult to do species-specific surveys. For these species, the question about “success” has to be evaluated differently based on maintaining habitat elements. How is habitat managed in a cost-effective manner? She posed questions to the TAC including what criteria should be used to evaluate habitat and how it could be monitored over time. She noted that there are two components to vegetation monitoring including large-scale monitoring over time such as remote sensing and aerial photography. The second component is photo monitoring. She noted that the Tucson Audubon report in Avra Valley has already established a baseline and photo points. Ralph asked how the TAC would distinguish between human influenced habitat changes and natural changes due to variations of rainfall and drought. Leslie commented that unforeseen and uncontrollable impacts do not need to be mitigated for, but it is important to be aware of conditions and modify things to the extent it is possible to mitigate for impacts.

Trevor noted that the SDCP is looking at a larger scale, and that the City should look closer and consider how regional changes affect observed changes in Avra Valley. Marit observed that it is important to ground truth to some extent to understand the remote sensing data. She said that she likes remote sensing because it is an objective measuring tool, however the element of ground truthing can be subjective. Trevor noted that establishing a baseline on the ground is very important, and noted variations due to drought vs abundant rainfall variations from year to year. The TAC discussed the feasibility of remote sensing. Ralph asked how the TAC would measure “good” habitat and asked if the baseline would automatically be considered “good.” Leslie suggested that the easier the data is to collect, the more frequently it could be taken. She suggested working with Sam Drake (Arizona Remote Sensing Center, University of Arizona) to see about the feasibility of remote sensing. Marit suggested the City talk with the County in order to avoid duplicating efforts.

Leslie said that, at this point, we are operating with the premise that the habitat captured within the conservation reserve system would be preserved and that management actions would insure that this happens in the long-run. Leslie asked the TAC if there were any features that might not be observed on an aerial photograph, either valley-wide or parcel specific, that would be worth including in the management and monitoring plan or within the species-specific surveys. Trevor suggested managing for invasive species. Leslie noted that invasive species monitoring and removal would be outlined for the BOMAs, and any restoration and habitat enhancement areas.

Leslie said that the City and SWCA would work on re-writing Chapter 6 per the TAC's comments and suggestions from consulting species experts. She said that the City hopes to finalize the Avra Valley HCP by the end of the year in order to provide it to the TAC for comment. Trevor asked who is going to do the monitoring and make the management decisions. Leslie said that Chapter 6 would outline that every x years, that City staff would sit down with AGFD, USFWS, and species experts to discuss new information. She explained that current staff, as appropriate, would likely be trained to do the site visits in order to take advantage of the knowledge of the sites they already have. In other cases where City staff could not be trained or not qualified, the monitoring work would be sub-contracted out. She said that she is not sure if this information would be required to be detailed in the HCP. Ralph agreed with Trevor's concern about making sure staff needs are outlined because Tucson Water currently does not have the funding for this level of land management.

Leslie reviewed the updated species tables detailing the conservation program. She noted that some of the data is still in the process of being updated including habitat calculations for burrowing owl habitat, pygmy-owl, ground snake, and Tucson shovel-nosed snake. She noted that currently the reserve strategy only covers approximately 25 percent of the mapped suitable habitat for ground snake. She noted that the TAC would need to consider if this was adequate and suggested that this species might be dropped off of the HCP. The County previously dropped this species because they figured they could not meet their conservation goals. Trevor said he was concerned about dropping the species, however if the conservation of habitat under other species' management plans captures ground snake habitat, he might be okay with dropping the specie. Leslie stressed this species is inherently difficult to protect.

4) Call to the public

No members of the public spoke up.

5) Next steps/Future Meetings

The TAC set the meeting schedule through the spring deciding to meet the first and third Wednesday afternoons of each month.